

What is Claimed is:

1. A method for treating an indication resulting from an alpha 6 subunit containing integrin-mediated pathological condition in a mammal, the method comprising administering to the mammal a treatment effective amount of an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.
2. The method of claim 1, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr, wherein said peptide is capable binding with an  $\alpha_6$  integrin subunit.
3. The method of claim 1, wherein the cell is contacted with an additional active ingredient along with said peptide, said active ingredient being selected from the group consisting of anti-leukotrienes, beta<sub>2</sub> antagonists and corticosteroids.
4. The method of claim 1, wherein said condition is an inflammation.
5. The method of claim 3, wherein said inflammation is mediated by a pro-inflammatory agent selected from the group consisting of cytokines, chemokines, chemotaxins and mitogens.
6. The method of claim 4, wherein said pro-inflammatory agent selected from the group consisting of fMLP, activated complement fragment, leukotriene B<sub>4</sub>, platelet activating factor, IL-4, IL-6, IL-8, IL-10, IL-13 and TNF $\alpha$ .
7. The method of claim 1, wherein said alpha 6 subunit containing integrin-mediated pathological condition is cell metastasis.

8. The method of claim 1, wherein said alpha 6 subunit containing integrin-mediated pathological condition is coronary heart disease.
9. The method of claim 1, wherein said peptide is f-Met-Leu-Phe-Phe.
10. A method for modulating the function of an  $\alpha_6$  subunit containing integrin, said method comprising contacting a cell having the  $\alpha_6$  subunit containing integrin with an effective function modulating amount of an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent, thereby modulating the integrin signal transaction pathway of said integrin.
11. The method of claim 10, wherein said an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.
12. The method of claim 10, wherein said cell is selected from the group consisting of peripheral blood mononuclear cells, peripheral blood polymorphonuclear cells, lymphocytes, granulocytes, eosinophils, basophils, dendritic cells, astrocytes, macrophages, activated T-cells and mast cells.
13. A cell surface complex comprising a cell surface  $\alpha_6$  integrin subunit and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.
14. The cell surface complex of claim 13, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification

agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.

15. A method for modulating an alpha 6 subunit containing integrin-mediated response, said method comprising forming a complex of a cell surface  $\alpha_6$  integrin subunit and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.

16. The method of claim 15, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.

17. A cell surface receptor complex comprising:  
an  $\alpha_6$  integrin subunit and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent,  
wherein compared to cells not contacted by the candidate integrin-mediated signal transduction pathway modification agent there is a change in the amount of PI3, Raf, Ras, Src, Erk-1, PLC  $\gamma$ , G-protein  $\alpha$ , G-protein  $\beta$  or G-protein  $\gamma$  kinases.

18. A cell surface complex comprising the VLA-6 integrin receptor and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.

19. The cell surface complex of claim 18, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.

20. A method for modulating an VLA-6 integrin-mediated response, said method comprising forming a complex of the VLA-6 integrin receptor and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.

21. The method of claim 20, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.

22. A cell surface receptor complex comprising an  $\alpha_6$  integrin subunit and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent, wherein compared to cells not contacted by the candidate integrin-mediated signal transduction pathway modification agent there is a change in the amount of PI3, Raf, Ras, Src, Erk-1, PLC  $\gamma$ , G-protein  $\alpha$ , G-protein  $\beta$  or G-protein  $\gamma$  kinases.

23. A cell surface complex comprising the VLA-6 integrin receptor and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.

24. The cell surface complex of claim 23, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.

25. A method for modulating an integrin-mediated response, said method comprising forming a complex of the VLA-6 integrin receptor and an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent.

26. The method of claim 25, wherein said alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent is a peptide having the formula f-Met-Leu-X where X is selected from the group consisting of Tyr, Tyr-Phe, Phe-Phe and Phe-Tyr.

27. A method for identifying an alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent, the method comprising the steps of:

attaching an alpha 6 subunit to an affinity column;

passing a solution containing a suspected alpha 6 subunit containing integrin-mediated signal transduction pathway modification agent over the affinity column substituted with an alpha 6 subunit to bind the suspected agent;

recovering bound agent by eluting in the presence of excess alpha 6 subunit; and

identifying the eluted bound agent.